Paragraph 3 of the specification with change indicated.

As shown in Figs. 2-3, the carriage assembly (18) contains the entire firing assembly, including a carriage (42), preferably constructed of 10/20 steel hardened to Rockwell 55. The carriage (42), of course, may be constructed of any suitable material known in the art. As shown in Fig. 3, the carriage (42) includes a front plate (44), a bottom plate pair (46) and a back strap (48). Provided on the bottom plate pair (46) are a plurality of holes and a slot (50). The slot (50) is preferably cut at a forty-five degree angle, with parallel walls (52) opening to a circular recess (54), having a diameter greater than the distance between the walls (52). As shown in Fig. 2, provided through the circular recess (54) is a flat-sided pin (56) which has a diameter across a first dimension only slightly smaller than the diameter of the circular recess (54), and a distance across a transverse direction only slightly smaller than the distance between the walls (52) of the slot (50). Preferably, this narrower distance is maintained across the entire dimension of the flat-sided pin (56), allowing the carriage assembly ~~(48)~~(18) to be removed from the frame (12) when the carriage assembly (18) is rotated a predetermined angle relative to the frame (12). The flat-sided pin (56) is secured to the frame (12) in such a manner that the carriage assembly (18) must be rotated in excess of forty-five degrees before the flat-sided pin (56) is in proper alignment with the walls (52) of the slot (50) to allow the carriage assembly (18) to be removed from the frame. The flat-sided pin (56) is frictionally engaged with the frame (12) to prevent rotation of the flat-sided pin (56) relative to the frame (12). Rotation of the flat sided pin (56) would prevent the desired removal of the carriage assembly (18) from the frame (12) upon rotation to the predetermined angle.

Paragraph 8 of the specification with changes indicated.

The slot (134) comprises a pair of walls (136) and a circular recess (138) similar in dimension to the walls (52) and circular recess (54) described above in association with the carriage (42). As shown in Fig. 2, the trigger guard assembly (96) is positioned within the carriage (42) and pinned in place by the various pin placements described above and below. A double torsion spring (140) is provided around the ~~flat sided~~ pin ~~(56)~~(64) biased between the back (142) of the hammer (66) and the base plate (100) of the trigger guard assembly (96).

Paragraph 9 of the specification with change indicated.

As shown in Fig. 2, the trigger (22) is provided with a hole (146) to receive a pin (148), which also passes through the hole pair (150) in the carriage (42) and the hole pair ~~(116)~~(106) in the trigger guard assembly (96). (Figs. 2-4). The trigger (22) is also provided with a sear engagement head (152) and a safety tail (154), including two safety fingers (156) and (158). (Figs. 2 and 5). As shown in Fig. 5, a safety pin (160) is provided through the hole pair (114) in the trigger guard assembly (96). The safety pin (160) is provided with a pair of rings (162) and (164), welded or otherwise secured to the safety pin (160). The safety pin (160) is provided with a plurality of spring loaded balls (166), motivated by springs (168), provided in recesses (170) in the safety pin (160). As shown in Fig. 5, the balls (166) ride in detents (172) provided in the trigger guard assembly (96). The system is preferably designed to allow the safety pin (160) to be shifted from the position shown in Fig. 5 to the position shown in Fig. 6, with the mechanism engaging the safety pin (160) in the desired orientation until specifically moved therefrom.

Paragraph 11 of the specification with change indicated.

As shown in Fig. 7, a rear carriage catch (174) is provided with a tab (176), a body (178) having a keeper (180), a head (182), a beak (184) and a hole (186). Provided through the hole (186) is a pin (188), secured through the hole (186) to the frame (12). (Figs. 2 and 7). Provided around the pin (188) is a double a torsion spring (192) biased between the body (178) of the rear carriage catch (174) and the frame (12). As shown in Fig. 7, the double torsion spring (192) extends around the pin (188) and around the body (178), back around the pin ~~(88)~~(188) and back to the frame (12), in a manner which motivates the rear carriage catch (174) in a counter-clockwise direction. Alternatively, any desired resilient motivation or securement may be utilized to maintain the rear carriage catch (174) in a closed position.

Paragraph 15 of the specification with change indicated.

As shown in Fig. 8, in the preferred embodiment, an ignition system (250) comprising a plastic jacket ~~(242)~~(252) and a primer (254) is provided. While any ignition system of suitable dimensions may be used, in the preferred embodiment, a full plastic jacket such as that sold by Knight Rifles of Centerville, Iowa is utilized in association with a 209 Primer, such as that known in the art for use in association with muzzleloaders. As shown in Fig. 8, the primer (254) is inserted into the jacket (252). The ignition system (250) is provided in front of the retractable face (232) in a manner described in more detail below. As shown in Fig. 8, when the ignition system (250) rests in front of the retractable face (232), the spring (244) motivates the retractable face (232) into a forward position, maintaining the primer (254) out of reach of the firing pin (86). The firing pin (86) remains out of reach until the carriage (42) and primer pocket (224) are rotated into battery, where the sleeve (256) encircles the nipple (258) of the breech plug (260). As the carriage (42) rotates, the nipple (258) motivates the sleeve (256) outward, placing the bore (262) in airtight communication with the bore (264) of the breech plug (260). The breech plug (260) may also be provided with a lip (266) to prevent the escape of gasses during ignition. As the carriage (42) rotates, the breech plug (260) prevents the sleeve (256) of the jacket (252) from moving forward with the carriage (42). The carriage (42) continues to rotate, compressing the spring (244) until the ignition system (250) is to a point where upon release of the hammer (66), the firing pin (86) is capable of engaging and igniting the primer (254). (Figs. 2 and 10).

Revised Paragraph 3 of the specification.

As shown in Figs. 2-3, the carriage assembly (18) contains the entire firing assembly, including a carriage (42), preferably constructed of 10/20 steel hardened to Rockwell 55. The carriage (42), of course, may be constructed of any suitable material known in the art. As shown in Fig. 3, the carriage (42) includes a front plate (44), a bottom plate pair (46) and a back strap (48). Provided on the bottom plate pair (46) are a plurality of holes and a slot (50). The slot (50) is preferably cut at a forty-five degree angle, with parallel walls (52) opening to a circular recess (54), having a diameter greater than the distance between the walls (52). As shown in Fig. 2, provided through the circular recess (54) is a flat-sided pin (56) which has a diameter across a first dimension only slightly smaller than the diameter of the circular recess (54), and a distance across a transverse direction only slightly smaller than the distance between the walls (52) of the slot (50). Preferably, this narrower distance is maintained across the entire dimension of the flat-sided pin (56), allowing the carriage assembly (18) to be removed from the frame (12) when the carriage assembly (18) is rotated a predetermined angle relative to the frame (12). The flat-sided pin (56) is secured to the frame (12) in such a manner that the carriage assembly (18) must be rotated in excess of forty-five degrees before the flat-sided pin (56) is in proper alignment with the walls (52) of the slot (50) to allow the carriage assembly (18) to be removed from the frame. The flat-sided pin (56) is frictionally engaged with the frame (12) to prevent rotation of the flat-sided pin (56) relative to the frame (12). Rotation of the flat sided pin (56) would prevent the desired removal of the carriage assembly (18) from the frame (12) upon rotation to the predetermined angle.

Revised Paragraph 8 of the specification.

The slot (134) comprises a pair of walls (136) and a circular recess (138) similar in dimension to the walls (52) and circular recess (54) described above in association with the carriage (42). As shown in Fig. 2, the trigger guard assembly (96) is positioned within the carriage (42) and pinned in place by the various pin placements described above and below. A double torsion spring (140) is provided around the pin (64) biased between the back (142) of the hammer (66) and the base plate (100) of the trigger guard assembly (96).

Revised Paragraph 9 of the specification.

As shown in Fig. 2, the trigger (22) is provided with a hole (146) to receive a pin (148), which also passes through the hole pair (150) in the carriage (42) and the hole pair (106) in the trigger guard assembly (96). (Figs. 2-4). The trigger (22) is also provided with a sear engagement head (152) and a safety tail (154), including two safety fingers (156) and (158). (Figs. 2 and 5). As shown in Fig. 5, a safety pin (160) is provided through the hole pair (114) in the trigger guard assembly (96). The safety pin (160) is provided with a pair of rings (162) and (164), welded or otherwise secured to the safety pin (160). The safety pin (160) is provided with a plurality of spring loaded balls (166), motivated by springs (168), provided in recesses (170) in the safety pin (160). As shown in Fig. 5, the balls (166) ride in detents (172) provided in the trigger guard assembly (96). The system is preferably designed to allow the safety pin (160) to be shifted from the position shown in Fig. 5 to the position shown in Fig. 6, with the mechanism engaging the safety pin (160) in the desired orientation until specifically moved therefrom.

Revised Paragraph 11 of the specification.

As shown in Fig. 7, a rear carriage catch (174) is provided with a tab (176), a body (178) having a keeper (180), a head (182), a beak (184) and a hole (186). Provided through the hole (186) is a pin (188), secured through the hole (186) to the frame (12). (Figs. 2 and 7). Provided around the pin (188) is a double a torsion spring (192) biased between the body (178) of the rear carriage catch (174) and the frame (12). As shown in Fig. 7, the double torsion spring (192) extends around the pin (188) and around the body (178), back around the pin (188) and back to the frame (12), in a manner which motivates the rear carriage catch (174) in a counter-clockwise direction. Alternatively, any desired resilient motivation or securement may be utilized to maintain the rear carriage catch (174) in a closed position.

Revised paragraph 15 of the specification.

As shown in Fig. 8, in the preferred embodiment, an ignition system (250) comprising a plastic jacket (252) and a primer (254) is provided. While any ignition system of suitable dimensions may be used, in the preferred embodiment, a full plastic jacket such as that sold by Knight Rifles of Centerville, Iowa is utilized in association with a 209 Primer, such as that known in the art for use in association with muzzleloaders. As shown in Fig. 8, the primer (254) is inserted into the jacket (252). The ignition system (250) is provided in front of the retractable face (232) in a manner described in more detail below. As shown in Fig. 8, when the ignition system (250) rests in front of the retractable face (232), the spring (244) motivates the retractable face (232) into a forward position, maintaining the primer (254) out of reach of the firing pin (86). The firing pin (86) remains out of reach until the carriage (42) and primer pocket (224) are rotated into battery, where the sleeve (256) encircles the nipple (258) of the breech plug (260). As the carriage (42) rotates, the nipple (258) motivates the sleeve (256) outward, placing the bore (262) in airtight communication with the bore (264) of the breech plug (260). The breech plug (260) may also be provided with a lip (266) to prevent the escape of gasses during ignition. As the carriage (42) rotates, the breech plug (260) prevents the sleeve (256) of the jacket (252) from moving forward with the carriage (42). The carriage (42) continues to rotate, compressing the spring (244) until the ignition system (250) is to a point where upon release of the hammer (66), the firing pin (86) is capable of engaging and igniting the primer (254). (Figs. 2 and 10).